Bacteroides thetaiotaomicron (in GI tract)
Helicobacter pylori (in stomach)

Skin: ~~Diptb~~ 1. Diphtheroids gr. (mainly in groin & armpits)
eg. Corynebacterium diphtheria
Propionibacterium acnes
2. micrococci gr. (inludes gr. staphylococci)
eg. Staphylococcus epidermis
3. streptococci gr. (α or β & γ hemolytic)
4. enterococci

yeast (eg. Candida)
fungi

Eye: transitory; include: staphylococci, streptococci, diphtheroid bacilli
Haemophilus & Neisseria

pharynx & trachea: stap. strep. (eg. Streptococcus agalactiae), d.p.bac. (eg. Cor. dip)
spirochetes, Neisseria, Haemophilus & Branhamella

Mouth & teeth: stap., strep. (esp. Strep. mutans), Lactobacillus acidophilus,
Actinomyces odontolyticus, anaerobic spirochetes & vibrios (comma-shaped bacteria)

GI: upper intestine lactobacilli & enterococci (eg. Enterococcus faecalis) 2
lower -"- & colon - mostly anaerobs (eg. Bacteroides & Clostridium), enterics (Escherichia coli & its relatives), Pseudomonas & Candida (a yeast)

Genitourinary tract: yeast (eg Candida); lactobacilli (in vagina);
Mycobacterium smegmatis (on penis);
urine may be contaminated by microbes from GI or genital tract

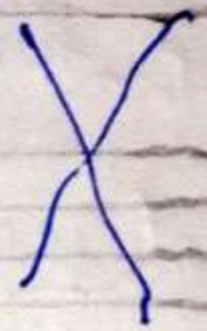
- staph. form grape like clusters (unlike strep.),
Gram +, catalase +, mostly in skin & mucous membrane of upper respiratory tract
- strep. Gram +, catalase -
- staph. can cause food poisoning due to exotoxin formation (not infection)
- this may happen when food is 'inoculated' with staph. from the skin and produce an exotoxin.
- strep. - require nutritionally fastidious (i.e. require rich medium eg. blood agar) for good growth.

the β hemolytic group A strep. includes Strep. pyogenes which causes tonsillitis, bronchopneumonia & scarlet fever.

pathogenic x non-pathogenic Stap. strains info

	Stap. aureus	Stap. epidermidis	Stap. saprophyticus
Virulence	abscesses, boils, acne, impetigo, osteomyelitis*	generally avirulent, may cause skin lesions & endocarditis	gen. avir.; implicated in urinary tract infections
Colony	gold-yellow color (au)	white	white
Hemolysis	β	γ	γ
DNase	+	−	−
Coagulase	+	−	−
Mannitol fermentation	+	−	−

*pyelonephritis



pathogenic x nonpathogenic Strep. strains info

	Strep. pyogenes	Strep. agalactiae	Strep. pneumoniae	Enterococcus faecalis
Virulence	tonsilitis, scarlet fever, impetigo, glomerulonephritis	puerperal fever, meningitis, endocarditis	pneumonia	urinary tract infections
Colony	white, small	white	white	off white
Hemolysis	β	β	α	α or γ
Lancefield gr.	A	B	none	D
Other	inhibited by bacitracin	indigenous to vaginal mucosa	bile sensitivity optochin sensitive	bile resistent optochin resistent

Gram+ (pos) rods:

- Diphtheroids (coryneforms) - Gr. 'koryne' = club
  - include Corynebacterium diphtheria strains
  - part of normal flora, but in unhealthy host may cause disease if infected by a φ hage
  - technically Gram+ but often show irregular staining (due to some mycoic acids in the cell wall).
  - usually rod or club shapes, grow together in V-shapes ('Chinese letters') or palisades.
  - gen. Corynebacterium includes plant & animal pathogens

Gram$^{(neg.)}$ rods:

- Enterobacteriaceae (enterics/enteric bacteria)
  - include Escherichia, Enterobacter, Salmonella, Shigella, Klebsiella, (Serratia, Proteus, Citrobacter, Edwardsiella & Providencia
    - these are Gram$^{(neg.)}$ short rods
      - do not form spores and are facultative anaerobes
      - oxidase - catalase + (except some Shigellas trains), nitrate reduction -
      - (all) ferment glucose
      - mostly part of the normal flora of the intestine
    - diseases caused by Salmonella: typhoid (enteric fever) (caused by S. typhi), paratyphoid (mild form of ent. f.) & gastroenteritis (food poisoning) (ent. f.)
    - diseases caused by Shigella: Shigellosis (dysentery; has characteristic diarrhea, fever & dehydration)

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what is:
- exotoxin
- inoculate

bacteria strains:
- gram (stain)
- Hemolysis
- catalase
- DNase
- coagulase

- puerperal fever
- mannitol fermentation
- lancefield group
- impetige
- osteomyelitis
- skin lesion

- optochin
- bacitracin
- phage
- Gram +/- rods

- pneumonia
- meningitis
- endocarditis
- pyelonephritis
- pathogenic x nonpathogenic
- scarlet fever
- tonsillitis
- glomerulonephritis
- off white

skin

divided by dermatologists to 3 major types: ~~oily~~

1. oily (having oil-producing sebacious glands) - scalp, upper back & crease of the nose
2. moist (skin & folds that contain many sweat glands, areas that may be affected by eczema flares) - nose, between fingers & toes, heels
3. dry (areas with paucity of sweat & sebacious glands) - forearms & buttocks

skin microflora:

Moraxella lwoffi
Corynebacterium amycolatum
Acinetobacter junii
Corynebacterium tuscaniae
Staphylococcus epidermidis
Corynebacterium accolens
Cor. simulans
Staph. capitis
Malassezia pachydermia
Mal. globosa
Brevibacterium epidermis
Cor. jeikeium
Cytrobacter freundii
Pseudomonas maltophilia
Staph. hominis